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Further Notes on Display Forms of the Long-tailed Bird of Paradise,
Epimachus meyeri meyeri Finsch.

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(Plates I-III).

In a previous paper¹ three distinct display forms of the Long-tailed Bird of Paradise, *Epimachus meyeri meyeri* Finsch, were described. Later, a second male presumed to be of the same subspecies was received at the New York Zoological Park. Variants of the display forms of this specimen have been noted and are recorded in the present paper.

The bird referred to in the original paper was collected at Deva-deva, Central Division, Papua, in October, 1928, by Mr. J. A. Ward and the author. Immature at the time of capture, the bird assumed full male plumage in September, 1931. Three distinct display forms were noted: pumping, horizontal, (referred to in the original paper as inverted) and upright. This bird died September 18, 1936.

The second bird, an adult male still living in the New York Zoological Park, was received in 1937, from a collection obtained by Mr. Shaw Mayer, in the Waria River area² of Southeast New Guinea. While the points of origin of these two birds could hardly be more than fifty air miles apart, they are separated by the formidable ramparts of the Wharton Range. After differences in display form had been noted, the possibility of subspecific difference came naturally to mind. This was suggested to Dr. A. L. Rand, who at that time was occupied with a study of New Guinea birds at the American Museum of Natural History. Following is a quotation of a letter from Doctor Rand, written under date of October 31, 1940, after examination of available material had been completed:

" . . . Now about *Epimachus*. I have just gone over what material we have from north

of the Range in southeast New Guinea. We have only three specimens with undoubted localities. They are definitely smaller than the average from south of the Range but still fall within the limits of variation. There seem to be no other differences of taxonomic importance, and on the basis of the material we have here, at least, it would not be possible to separate them. Greenway, studying the collection from near Wau, came to the same conclusion some years ago . . . "

Since it appears that, at least in the light of present knowledge, the two birds in question are subspecifically identical, no explanation of difference in display form is offered.

The "pumping" form, seen only once in the first bird, has not been noted in the second. The "horizontal" or "inverted" form, with pectoral shields concealed, used frequently by the first, is seen rather rarely in the second but in identical manner. It is in the upright form that striking differences occur.

In the first bird, at the climax of the upright form, the pectoral shields were thrown upward, like two arms, the narrow tips being separated by an inch or more. The tail was held completely rigid and compressed. In the second bird, the shields are joined at the top, forming a broad fan, giving a quite different appearance. At the same time, the short outer tail feathers are rapidly opened and closed, the long central ones remaining quiescent. All other parts of the ritual are identical with those originally described.

While these variations have been noted seasonally since 1937, publication has been withheld pending availability of suitable photographs of the second bird. These have now been obtained through the skill and patience of Mr. Samuel Dunton, staff photographer, and are presented herewith.

¹ *Zoologica*, Vol. XI, No. 7, Dec. 3, 1932, pp. 82-84.

² N. Wharton-Tigar, *Avicultural Magazine*, Fifth Series, Vol. II, June, 1937, p. 182.

EXPLANATION OF THE PLATES.

PLATE I.

- Fig. 1. *Epimachus meyeri meyeri* in normal position.
- Fig. 2. Raising the pectoral shields for display. This position approximates the climax of the form originally described.

PLATE II.

- Fig. 3. Shields fully expanded and tightly closed above.

- Fig. 4. The outer tail feathers are rapidly opened and closed.

PLATE III.

- Fig. 5. At the full climax, with plumes expanded and body flattened, the curved beak is opened to show the yellow interior of the mouth.



FIG. 1.



FIG. 2.

FURTHER NOTES ON DISPLAY FORMS OF THE LONG-TAILED BIRD OF PARADISE
EPIMACHUS MEYERI MEYERI FINSCH.



FIG. 3.



FIG. 4.

FURTHER NOTES ON DISPLAY FORMS OF THE LONG-TAILED BIRD OF PARADISE
EPIMACHUS MEYERI MEYERI FINSCH.



FIG. 5.

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